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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/690,660

10/23/2003

Heui Seag Park

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STAAS & HALSEY LLP

SUITE 700

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EXAMINER

VAN, QUANG T

ART UNIT

PAPER NUMBER

3742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/690,660

Applicant(s)

PARK, HEUI SEAG

Examiner

Quang T. Van

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-23 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21,22 and 26-28 is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-20,23 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/3/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Withdrawal of Allowable Subject Matter

1. The indicated allowability of claim 15 is withdrawn in view of reconsideration of reference(s) Hay (US 4,523,169). The Examiner regrets for any inconveniences.

Rejections based on the newly cited reference(s) follow.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 8, 15-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 11, and 18 of copending Application No. 10/691,595 in view of Hay (US 4,523,169) and Pierce (US 4,337,820). The copending Application No. 10/691,595 discloses a cooking cavity (502); an electrical components area (501) partitioned from the cooking cavity (502); a magnetron (503) disposed in the electrical components area (501); a transformer (11) in

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the electrical components area (501); a container (10) to accommodate the transformer (11), filled with a cooling material (105) to cool the transformer (11), and having base attached to the electrical components area (501). However, the copending Application No. 10/691,595 does not disclose the base formed by bending each end thereof downwardly and inwardly, and a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is mounted on an outside of the transformer assembly. Hay discloses a base (56) formed by bending each end thereof downwardly and outwardly (Figure 1). Pierce discloses a temperature-sensitive switch (32) electrically connected to the transformer (11), wherein the temperature-sensitive switch (32) is directly mounted on an outside surface of the transformer assembly (11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in the copending Application No. 10/691,595 a base formed by bending each end thereof downwardly and outwardly in order to space the transformer from the surface of the electrical components area by a certain distance, and a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is directly mounted on an outside surface of the transformer assembly as taught by Pierce in order to shut off power when a temperature of the transformer is a predetermined overheating temperature. With regard to limitation "base formed by bending each end thereof downwardly and inwardly", Hay only discloses a base formed by bending each end thereof downwardly and outwardly. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the base bending inwardly. Since the base

bending inwardly or outwardly is an obvious design choice because the base is performed the same on both ways.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 8, 10, 15-17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Hay (US 4,523,169) and Pierce (US 4,337,820) cited in previous Office Action. Wallin discloses a cooking cavity (24); an electrical components area (10) partitioned from the cooking cavity (24); a magnetron (15) disposed in the electrical components area (10); a transformer (18) in the electrical components area (10); a transformer assembly (10) to accommodate the transformer (18), filled with a cooling material (col. 2, lines 46-48) to cool the transformer (18), and having base attached to the electrical components area (figure 3). Wallin also suggests for any switch may mounting outside the transformer assembly (col. 2, lines 43-45). However, Wallin does not disclose the base formed by bending each end thereof downwardly and inwardly, and a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is mounted on an outside of the transformer assembly. Hay discloses a base (56) formed

by bending each end thereof downwardly and outwardly (Figure 1). Piece discloses a temperature-sensitive switch (32) electrically connected to the transformer (11), wherein the temperature-sensitive switch (32) is directly mounted on an outside surface of the transformer assembly (11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin a base formed by bending each end thereof downwardly and outwardly in order to space the transformer from the surface of the electrical components area by a certain distance, and a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is directly mounted on an outside surface of the transformer assembly as taught by Pierce in order to shut off power when a temperature of the transformer is a predetermined overheating temperature. With regard to claim 1, the limitation "base formed by bending each end thereof downwardly and inwardly", Hay only discloses a base formed by bending each end thereof downwardly and outwardly. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the base bending inwardly. Since the base bending inwardly or outwardly is an obvious design choice because the base is performed the same on both ways. With regard to claim 19, the container is being made of copper or aluminum. Wallin and Pierce do not mention what kind of material that the container is being made. It would have been obvious to one having ordinary skill in the art to use copper or aluminum as a material for a container. Doing so would improve cooling of the transformer, since copper and aluminum are good materials for dissipating heat, which is generated from the transformer.

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6. Claims 4-5, 7, 11-12, 14, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Hay (US 4,523,169), Pierce (US 4,337,820) and further in view of Lim (US 5,625,520) cited in previous Office Action. Wallin/Hay/Pierce disclose substantially all features of the claimed invention except a primary coil in the transformer that receives an input voltage, wherein the temperature-sensitive switch is connected in series to the primary coil of the transformer. Lim discloses, figure 1, a primary coil (L3) in the transformer that receives an input voltage, wherein the temperature-sensitive switch (TH) is connected in series to the primary coil (L3) of the transformer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin/Hay/Pierce a primary coil in the transformer that receives an input voltage, wherein the temperature-sensitive switch is connected in series to the primary coil of the transformer as taught by Lim in order to detect and disconnect power when a temperature of a surface of the transformer is a predetermined overheating temperature. With regard to claims 4 and 11, Lim discloses International Electrotechnical Commission (IEC) regulates that the temperature of the high voltage transformer of the microwave oven should not be over 210⁰C. Lim does not disclose the overheating temperature ranges form about 80⁰C to about 150⁰C. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select overheating temperature ranges form about 80⁰C to about 150⁰C, since it has been held that selecting overheating temperature range involves only routine skill in the art. *Inre Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1995).

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7. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Hay (US 4,523,169), Pierce (US 4,337,820) and further in view of Cooney (US 2,053,944), cited in previous Office Action. Wallin/Hay/Pierce disclose substantially all features of the claimed invention except the temperature-sensitive switch being connected in series to the secondary coil of the transformer. Cooney discloses temperature-sensitive switch being connected in series to the secondary coil of the transformer (, Figure 4, page 1, col. 2, lines 34-39). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin/Hay/Pierce temperature-sensitive switch being connected in series to the secondary coil of the transformer as taught by Cooney in order to shut off power when a temperature of a surface of the transformer is a predetermined overheating temperature.

8. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Hay (US 4,523,169), Pierce (US 4,337,820) and further in view of Reed (US 1,571,300) cited in previous Office Action. Wallin/Hay/Pierce disclose substantially all features of the claimed invention except the container having corrugated sidewalls. Reed discloses a container having corrugated sidewalls (6, lines 70-72). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin/Hay/Pierce a container having corrugated sidewalls as taught by Reed in order to provide a larger heat dissipating area.

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9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Pierce (US 4,337,820), Reed (US 1,571,300) and further in view of Cronin (US 4,169,965), cited in previous Office Action. Wallin/ Pierce/Reed disclose substantially all features of the claimed invention except a cooling fan. Cronin discloses a cooling fan (36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin/ Pierce/Reed a cooling fan as taught by Cronin in order to draw external cool air into the electrical component area to cool the transformer.

10. Claims 21, 22 and 26-28 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest an input line connected to the transformer through a top of the container to provide external power to the transformer, and an output line connected to the transformer through the top of the container to provide power to the magnetron, the input line and the output line being connected to the top of the container using epoxy resin to keep the container tightly sealed as recited in claim 21; a terminal unit attached to a top of the container, an input line connected to the transformer through the terminal unit to provide external power to the transformer, and an output line connected to the transformer through the terminal unit to provide power to the magnetron as recited in claim 22.

Response to Amendment

12. Applicant's arguments with respect to claims 1, 3-8, 10-23, and 26-29 have been considered but are moot in view of the new ground(s) of rejection.

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13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Frederick (US 4,027,205) discloses a compact and portable arc welding apparatus of the transformer reactor type.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QV

QV
February 20, 2007

Quang T Van

Quang T Van
Primary Examiner
Art Unit 3742